Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

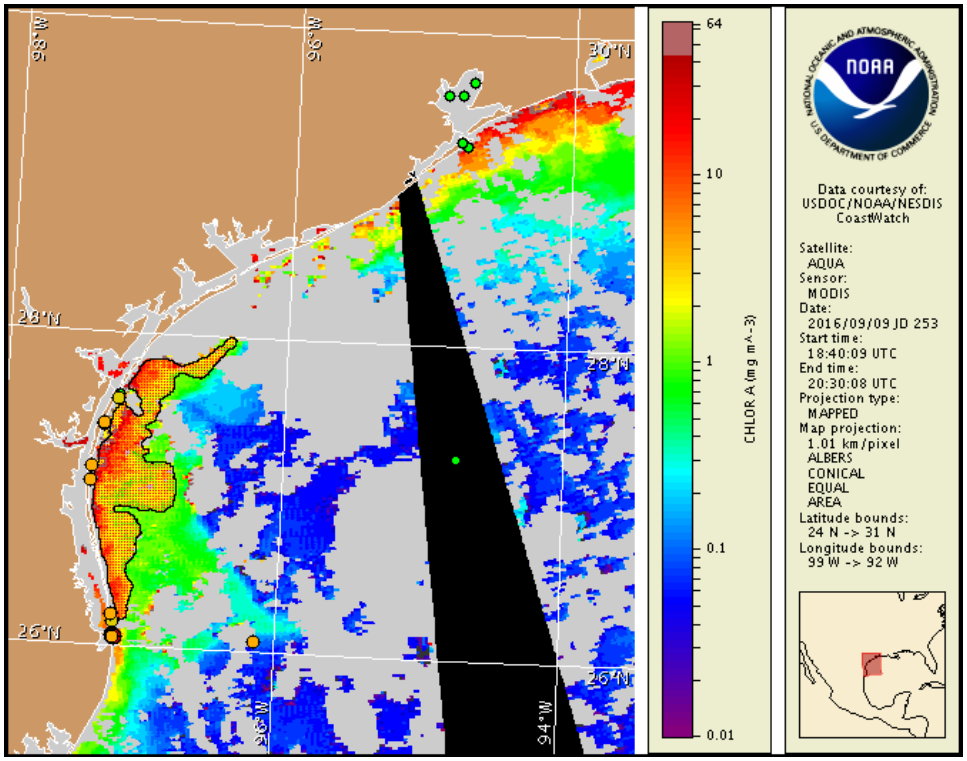
Monday, 12 September 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, September 8, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 2 to 9: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml

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To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast in the Port Aransas/Mustang Island to Beach Access 6 to Rio Grande regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Monday, September 12 through Thursday, September 15 is listed below:

County Region: Forecast (Duration)
Aransas Pass to PINS region: Moderate (M-Th)
Padre Island National Seashore region: Moderate (M-Th)
Mansfield Pass to Beach Access 6 region: Moderate (M-Th)
Beach Access 6 to Rio Grande region: High (M-Th)
Bay region-Lower Laguna Madre to Laguna Vista: Moderate (M-Th)
All Other Texas Regions: None expected (M-Th)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Over the last several days, respiratory irritation and discolored water have been reported from the Padre Island National Seashore, Beach Access 6 to Rio Grande, and Bay region-Lower Laguna Madre to Laguna Vista regions. Dead fish have been reported from the Beach Access 6 to Rio Grande region.

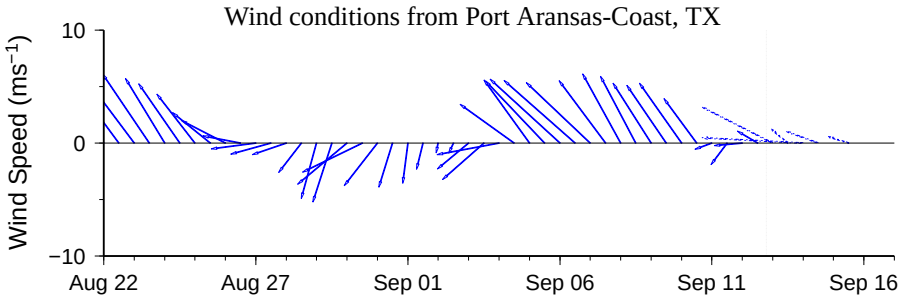
Analysis

Recent samples collected along- and offshore the coast of Texas from Galveston Bay to the Rio Grande region have identified 'not present' to 'high' concentrations of *Karenia brevis*, with the highest concentrations collected from Beach Access 6 to the Rio Grande region (TPWD; 9/8-9). In the Galveston Island region, sampling indicates that *K. brevis* is 'not present' (TPWD; 9/8-9). In the Aransas Pass to Padre Island National Seashore (PINS) region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates that *K. brevis* ranges between 'not present' and 'very low b' concentrations (TAMU; 9/9-12). In the PINS region, samples from Malaquite Beach indicate 'medium' *K. brevis* concentrations remain (TPWD; 9/9). *K. brevis* concentrations up to 'high' have been observed from Beach Access 5 to the Brazos Santiago Pass North Jetty (TPWD; 9/9). For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (9/9; shown left) is partially obscured by clouds along the Texas coast from Sabine Pass to the Rio Grande, limiting analysis. Patches of elevated to very high chlorophyll (2 to >20 μg/L) are visible from Sabine Pass to Galveston Island. Elevated chlorophyll from Sabine Pass to Galveston Island is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast. Patches of elevated to very high chlorophyll (2 to >20 μg/L) are visible stretching from Mustang Island along the PINS region to south of the Rio Grande. As of yesterday, (MODIS Aqua 9/11, not shown) the densest patches of elevated to high chlorophyll (2-13 μg/L) are visible along the Mansfield Pass to Beach Access 6 region, extending up to 20 km offshore. Continued sampling in the region is recommended.

Forecast models based on predicted near-surface currents indicate a maximum transport of 30 km south from the Port Aransas region, 15 km north from PINS Mile Marker #15, and 70 km north from Brazos Santiago Pass from September 9-15.

Lalime, Kavanaugh

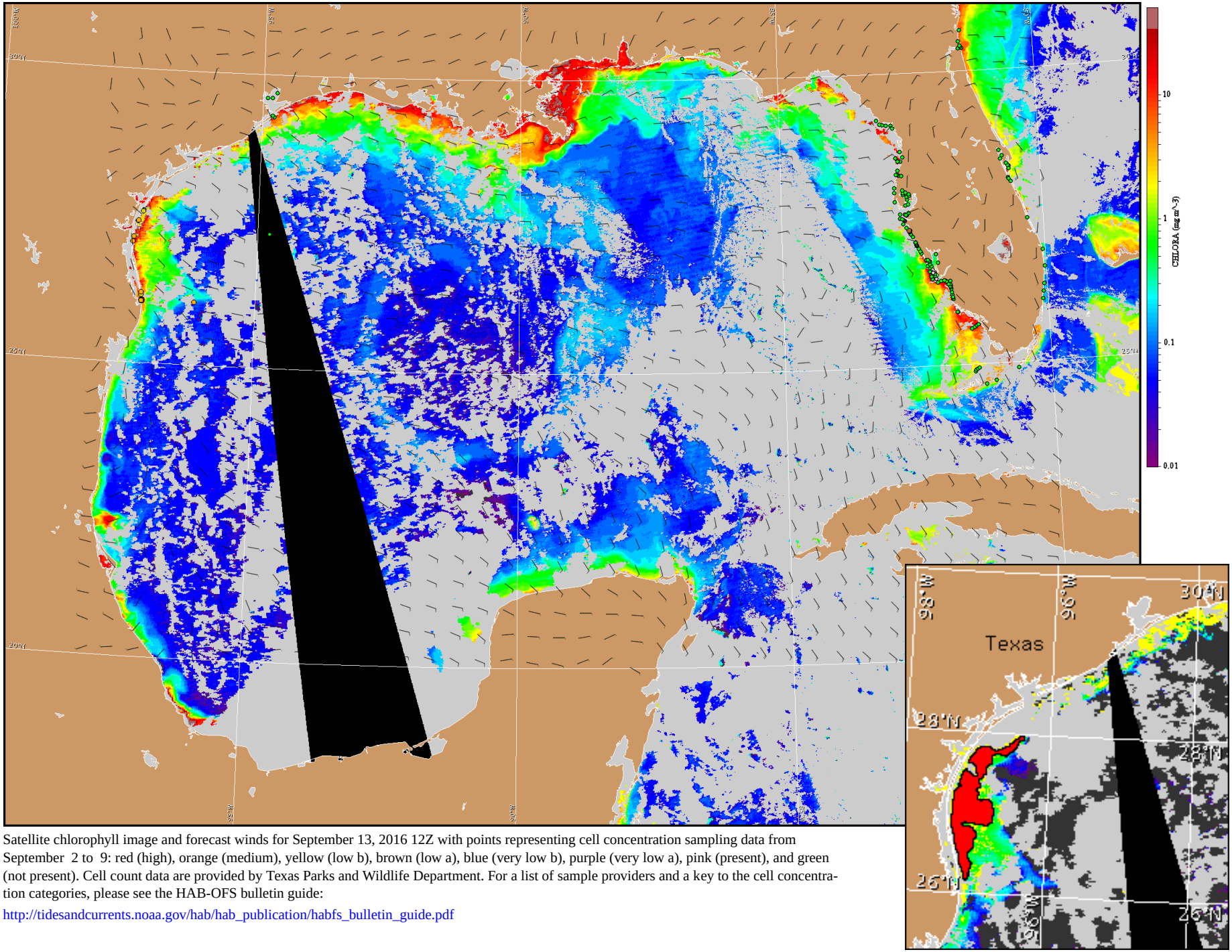


Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

Wind Analysis

Baffin Bay to Port Aransas: Northwest wind (5kn, 3m/s) today shifting east (5-10kn, 3-5m/s) in the afternoon. Southeast winds (5-15kn, 3-8m/s) tonight through Tuesday shifting to east to northeast winds (5-15kn) Tuesday afternoon through Wednesday night. Southeast winds (5-15kn) Thursday.

Baffin Bay to Port Mansfield: Light winds becoming east to southeast winds (7-13kn, 4-7m/s) this afternoon through Tuesday night. Northeast winds (7-12kn, 4-6m/s) Wednesday. East winds (7-12kn) Wednesday night shifting south early in the morning. Southeast winds (7-14kn, 4-7m/s) Thursday night.



Satellite chlorophyll image and forecast winds for September 13, 2016 12Z with points representing cell concentration sampling data from September 2 to 9: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).